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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,473	06/01/2006	Bernhard Bauer	2003P17612	3841
24131 7590 05/13/2008 LERNER GREENBERG STEMER LLP P O BOX 2480 HOLLYWOOD, FL 33022-2480			EXAMINER WILLOUGHBY, TERRENCE RONIQUÉ	
			ART UNIT 2836	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,473	Applicant(s) BAUER ET AL.	
	Examiner TERRENCE R. WILLOUGHBY	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 5-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/1/06 and 3/27/07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8-9 are rejected under 35 U.S.C. 102 (b) as being anticipated by Tezuka et al. (US 4,287,436).

3. Regarding claim 8, Tezuka et al. in (Fig. 1a-1b), discloses the method for controlling an electrical load, which comprises the steps of:

checking an actuation status of a first switch ((Tr1) and col. 3, ll. 18-23 and ll. 58-67);

comparing a first voltage with a predefined voltage threshold resulting in a comparison result (col. 3, ll. 67 thru col. 4, ll. 1-2);

determining a fault situation in dependence on the comparison result and the actuation status of the first switch (col. 4, ll. 3-10); and operating a second switch (Tr31) in dependence on the comparison result and/or the actuation status of the first switch ((Tr21) and col. 4, ll. 3-17), an operation of the second switch (Tr31) being delayed by a predefined period (i.e. the delayed predefined period is inherent because the voltage potential (Vx) detected by the second transistor (Tr31) has to be higher than the voltage V1 in order for the second transistor (Tr31) to activate, wherein $V1 = V_{cc} + V_{be}$, where

the V_{be} is the base-emitter voltage of the second transistor threshold (Tr31). The delayed predefined time required for the threshold voltage of the second transistor threshold (Tr31) to reach that threshold level is illustrated in Fig. 1B.), resulting in that after the predefined period lapses energy stored in the electrical load (L) will have discharged via a freewheeling circuit (col. 4, ll. 35-56).

4. Regarding claim 9, Tezuka et al. discloses the method according to claim 8, which further comprises closing the first switch (Tr21) with a switch-on- again signal after a fault situation (col. 4, ll. 35-56).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dyer (US 4,585,986) in view of Gronbach et al. (US 2003/0151870 A1).

7. Regarding claim 5, Dyer in (Fig. 1), discloses a circuit configuration for controlling an inductive load, comprising:

A supply voltage source (7) having a first potential terminal and a second potential terminal (i.e. the positive terminal of the battery bank (7) is the first potential terminal and the negative terminal of the battery bank (7) is the second potential terminal)

A first input connected to said first potential terminal (i.e. the node where the positive terminal of the battery bank (7) connects to the collector terminal of transistor (19));

A second input connected to said second potential terminal (i.e. the node where the negative terminal of the battery bank (7) connects to the emitter terminal of transistor (21));

An output (i.e. (A, B)) for connecting to the inductive load (5), the inductive load (5) being further connected to said second potential terminal of said supply voltage source (i.e. the inductive load (5) is connected to the negative terminal of the battery bank (7) through the outputs nodes (A, B));

A first switch (19) connected between said first input (i.e. the node where the positive terminal of the battery bank (7) connects to the collector terminal of transistor (19)) and said output (A), said first switch (19) receiving and controlled by a first control (31) signal for switching the inductive load (5) on and off;

A freewheeling circuit (21, 25) connected between said second input (i.e. the node where the negative terminal of the battery bank (7) connects to the emitter terminal of transistor (21)) and said output (A, B), said freewheeling circuit (21, 25) having a second switch ((21) and col. 6, ll. 16-22 and ll. 64-68); and

A monitoring unit (29) monitors a voltage reference signal in said freewheeling circuit (21, 25) and closes and/or opens said second switch (21) via a second control signal (col. 4, ll. 22-37) in dependence on the voltage reference signal of the comparators (43, 45), said monitoring unit (29) having a delay element (i.e. the delay

element in the monitoring unit (29) is inherent (see Fig. 3 and col. 5, ll. 65 through col. 6, ll. 1-35), which shows the monitoring unit (29) and the timing of opening said second switch (21) after a predefined period) when a predefined voltage threshold (43, 45) has been undershot or exceeded, with a result that after the predefined period energy stored in the inductive load will have discharged via said freewheeling circuit (col. 6, ll. 60 thru col. 7, ll. 1-8).

Dyer does not explicitly disclose the monitoring unit (29) monitoring a potential in said freewheeling circuit and closes and/or opens said second switch via second control signal in dependence on the potential.

However, Gronbach et al. in (Figs. 1-2), discloses a monitoring unit (26) monitoring a potential in said freewheeling circuit (14) and closes and/or opens said second switch (14) via second control signal (11, 30) in dependence on the potential (page 2, paragraphs [0014-0016]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the monitoring unit of Dyer with the monitoring unit of Gronbach et al. wherein the potential of the freewheeling circuit is monitored in order to protect the freewheeling switching means from over-voltages and over-currents.

8. Regarding claim 6, Dyer in view of Gronbach et al. discloses the circuit configuration according to claim 5, wherein said monitoring unit has a linking unit (Dyer, Figs. 1-2, shows a linking unit (i.e. the demand and shunt signals coupled to the monitoring unit (29)) with two inputs (Dyer, Figs. 1-2, the demand and shunt signals

represents two input signals of the monitoring unit (29)) and the one output (Dyer, Fig. 2, (Ve)) outputting the first control signal, the first control signal being dependent on a level and a time curve of signals at said two inputs of said linking unit. Dyer, two inputs signals comprising the demand and shunt signal shown in Fig. 2 inherently has a time curve of the signals because the subtractor (41) has to have both input signals inputted at the same time in order to compare a voltage reference in the circuit and necessary for the circuit to function properly.

9. Regarding claim 7, Dyer in view of Gronbach et al. discloses the circuit configuration according to claim 5, wherein the circuit configuration is a protective circuit providing safe operation of the inductive load (col. 6, ll. 60 thru col. 7, ll. 1-8 and ll. 27-30).

10. Regarding claim 8, Dyer in view of Gronbach et al. discloses all the method limitations recited above in claim 5.

11. Regarding claim 9, Dyer in view of Gronbach et al. discloses all the method limitations recited above in claims 5 and 7.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERRENCE R. WILLOUGHBY whose telephone number is (571)272-2725. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

TRW
5/8/08